CLAIMS

1. A sensor for determining the absolute angular position of a rotating member over 360°, characterized in that it comprises:

- a rotating part (14), the rotation of which is linked to that of the rotating member, which rotating part creates a variable magnetic flux;
- a fixed part (16) for supporting probes;
- at least two probes (22, 26) supported by the fixed part and each having an output current signal,
- the first (22) of the two probes being subjected to a first magnetic flux that can vary periodically with the rotation of the rotating part and having an output signal with discontinuities when the magnetic flux passes in each direction through a specified value, the second (26) of the two probes being subjected to a second magnetic flux that can vary periodically with the rotation of the rotating part, the variations of the second magnetic flux being shifted in phase by 90° relative to the variations of the first magnetic flux and having an output signal which is a continuous function of the magnetic flux, and
- a device (30) for adding the currents from the two probes, giving an output current signal not having the same value twice over 360°, which consists of the connection (30) of the two wires (24, 28) carrying the output signals from said probes owing to the fact that the range of variation of the output current from the first probe (22) is greater than the range of variation of the output current from the second probe (26).

2. The sensor as claimed in claim 1, characterized in that the feature whereby the output current signal does not have the same value twice over 360° is due to the fact that the range of variation of the output current from the first probe (22) is

slightly greater than the range of variation of the output current from the second probe (26).

3. The sensor as claimed in one of claims 1 and 2, characterized in that the rotating part comprises a magnet (14), the magnetization direction of which is perpendicular to the axis of rotation of the rotating part, and the fixed part (16) that surrounds the magnet defines two airgaps (18, 20) in which the magnetic fluxes are offset by 90°, the probes (22, 26) being placed in these two airgaps (18, 20).

4. The sensor as claimed in any one of the preceding claims, characterized in that the specified value of the magnetic flux for which the discontinuities in the signal from the first probe (22) occur corresponds to the reversal of the sign of the magnetic flux to which the first probe is subjected.

5. The sensor as claimed in any one of the preceding claims, characterized in that the probes (22, 26) are Hall-effect probes.

6. The sensor as claimed in any one of the preceding claims, characterized in that the first probe (22) gives a binary signal having two different constant current values between two angular ranges each covering 180°.

7. The sensor as claimed in any one of the preceding claims, characterized in that the second probe (26) gives an output current signal represented by a function comprising two parts that vary linearly with the angle of rotation, these two parts having opposite slopes.

8. The sensor as claimed in any one of the preceding claims, characterized in that the fixed part forming a pole piece (16) is made of a material producing a hysteresis phenomenon.

9. The sensor as claimed in any one of the preceding claims, characterized in that the sensor further includes a load resistor (12) that receives the output signal from the addition device (30), at the terminals of which load resistor a measurement voltage is available.

10. The sensor as claimed in claim 9, characterized in that it further includes a passive filter (36).